

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A self-expanding stent delivery system comprising:

 a substantially tubular shaft having a proximal end, a distal end, a guidewire lumen extending between the proximal and distal ends, and a stent bed proximate the distal end upon which a self-expanding stent is positioned; and

 a substantially tubular sheath defining an interior volume and coaxially positioned over the tubular shaft and stent, the tubular sheath including an outer polymeric layer and a substantially impenetrable and lubricious inner coating layer affixed to and covering the entire surface of the outer polymeric layer in the region of the stent bed and configured to prevent the stent from embedding in the substantially tubular sheath without reducing the flexibility of the tubular sheath, the inner layer comprising pyrolytic carbon.

Claim 2 (Original): The self-expanding stent delivery system according to Claim 1, wherein the outer polymeric layer comprises Nylon®.

Claim 3 (Cancelled)

Claim 4 (Previously Presented): The self-expanding stent delivery system according to Claim 1 wherein the pyrolytic carbon is affixed directly to the polymeric layer.

Claim 5 (Previously Presented): The self-expanding stent delivery system according to Claim 1, wherein the pyrolytic carbon is affixed to a substrate, the substrate being affixed to the polymeric layer.

Claim 6 (Currently Amended): The self-expanding stent delivery system according to Claim 1, wherein the substantially impenetrable and lubricious inner coating layer is affixed to the outer polymeric layer along the entire length of the tubular sheath.

Claim 7 (Currently Amended): The self-expanding stent delivery system according to Claim 1, wherein the substantially impenetrable and lubricious inner coating layer is affixed to the outer polymeric layer along the length of the tubular sheath proximate the stent bed.

Claim 8 (Currently Amended): A self-expanding stent delivery system comprising:

a substantially tubular shaft having a proximal end, a distal end, a guidewire lumen extending between the proximal and distal ends, and a stent bed proximate the distal end upon which a self expanding stent is positioned; and

a substantially tubular sheath defining an interior volume and coaxially positioned over the tubular shaft and stent, the tubular sheath including an outer polymeric layer and a substantially impenetrable and lubricious inner coating layer affixed to and covering the entire surface of the outer polymeric layer in the region of the stent bed without reducing the flexibility of the tubular sheath and configured to prevent the stent from embedding in the substantially tubular sheath, the substantially impenetrable and lubricious inner coating layer comprises ceramic coatings.